5.3 ASI Theater Testing

SI research has been criticized for its unrepresentative audience samples, yet it remains a major contributor to network and movie studio program testing in America. ASI provides valuable data because its audiences are consistent from one time to the next. It has established norms from all its previous testing of programs, films and commercials against which new findings are weighed. Given the many programs evaluated during past decades and the fact that few programs are really "new" in any significant way, comparing how well a new show tests to how others like it have tested in the past produces useful information. The results are especially noteworthy when a program produces a negative or low evaluation because the average ASI participant evaluates programs positively. Of course, not all programs that test positively turn out to be even modestly successful when put on a network schedule

(factors independent of the show's content have more influence on ratings), but very few of those that test negatively at ASI later succeed.

Frequently, prime-time series that have slipped in the ratings are tested with live audiences to determine which aspects of the program, if any, can be manipulated to improve the popularity of the series. The testing instruments range from simple levers and buttons, such as those used in ASI theaters, to more controversial methods, such as skin conductance meters measuring respiration and perspiration. Programmers seek aids in understanding the weaknesses and strengths of a series that is performing below expectations. Sometimes the research suggests a change of characters or setting that revitalizes a program. (If research results are no help, the cynical programmer usually suggests adding a dog or a child.)

Concept and pilot testing stress general plot lines and main characters, seeking to discover if they are understood and appeal to a variety of people. Ongoing program testing focuses on more subtle evaluations of the voices, manners, style and interactions of all characters. In fact, different actors and plot lines are sometimes used for separate screenings to find out which cast and plot audiences prefer. Postproduction research can discover a poor program opening or an audience's difficulty in understanding the main theme of an episode.

Unfortunately, the theater environment can't reflect at-home viewing conditions and is thus a less than ideal research method. It does, however, supply detailed data that can be matched to screen actions, adding fodder for programming decisions. In many test markets where insertion equipment is available, researchers send alternate versions of pilot programs (and commercials) to different cable homes and interview the viewers on their reactions. This necessitates producing alternate versions of a program, however—a huge expense not lightly undertaken.

A popular method for program testing is using streaming video over the internet to reach test audiences. Online data collection simplifies the research process and reduces the chance for error in the data. As more people watch video online, theater and cable testing may eventually be replaced, although both are still going strong.

Promotion Testing

Competition for audiences requires that most programmers continually produce effective promotional materials. Promotional spots advertise particular episodes of a series, special shows, movies, newscasts or unique aspects of a station's or service's programming (images and identities).3 These promos can be tested before they are aired to find out whether they communicated what was intended.

Much of the promotional testing being done uses online audience samples. Strategic Media Research (SMR), a research and marketing company that has specialized in radio, began testing TV promos online at the turn of the century. Clients include MTV, VH1, Comedy Central, Country Music Television and Spike. Some testing firms used to conduct tests in shopping centers, intercepting people at random to invite them to view promos in return for cash or merchandise. Promo evaluation, especially for radio, sometimes includes group and theater testing that emphasizes such measures as memorability, credibility and persuasibility. After demographic data are gathered, other questions are asked and associated with participants' opinions. Promo-copy testing has become a standard practice in the industry.

As multichannel and mobile television entered the on-demand era, promotion testing increased in importance and became even more critical and more widely used. Menu-driven program selection (video-on-demand, or VOD) is more influenced by on-air promos and guide channels than by scheduledriven program selection, so media companies realize that promos need to be effective.

Qualitative Audience Research

In addition to program testing, which applies mostly to television programs and movies, stations use qualitative research to get audience reactions to program materials, personalities, and station or system image. Using focus groups is one such research method. Radio stations also use call-out research to test their programming, and network television and majormarket stations make use of television quotient data (TvOs). Oualitative audience research is the most common phrase used in the industry to refer to all of these research techniques. (See 5.4 about the beginnings of qualitative research in the radio days.)

Focus Groups

One method of gathering information from a group of people is to conduct small group testing. A focus group is a set of 10 or 12 people involved in a controlled discussion. A moderator leads a conversation on a predetermined topic, such as a music format or television newscast, and structures the discussion with a set of questions. Predetermined criteria guide the recruitment of individuals for participation

5.4 Herta Herzog and Qualitative Radio Research*

erta Herzog is perhaps best known for her pioneerina "aratifications" research on 1940s radio serial listeners: "What do we really know about daytime serial listeners?" This study, as well as several of her earlier projects, marked Herzog as a key developer of personal interviews as an approach to learning about radio audiences. Her method was the forerunner of much of today's qualitative research into television and the internet.

As a graduate student in Austria, Herzog trained with Karl Bühler, an experimental psychologist who made several contributions to the psychology of thinking. Bühler argued that there were three sources of knowledge about human psychology: observation of human behavior, observation of the products of human culture and human introspection. By asking the proper questions, then, introspection could be obtained from ordinary people. Herzog's dissertation research was an early application of these ideas. She had six speakers, each different in sex, age, physical type and occupation, read the same passage over the radio on subsequent days of the same week. Then, Herzog distributed questionnaires in popular stores that shoppers mailed back

to her, analyzing them to learn what kinds of social and personal characteristics listeners derived simply from voice and diction. Later, Herzog developed the "depth interview," which involved open-ended questions and probes. She used this technique in her gratifications research about radio serials and guiz shows. The day after the 1938 War of the Worlds broadcast, she used this method to find out why so many listeners were frightened. These early interviews were summarized in a memo to Frank Stanton and became the basis for the interview schedule for the larger well-known study, "The Invasion from Mars."

Just as television was peeking over the horizon, Herzog left academia in 1943 to join the McCann-Erickson advertising agency, where she applied her techniques to motivation research. She stuck to the qualitative aspects of radio programs and commercials and developed ideas that others later applied to other media.

^{*}Women in Communication: A Biographical Sourcebook, edited by Nancy Signorielli. Copyright 1996. Reproduced with permission of ABC-CLIO INC. via Copyright Clearance Center.

in focus groups. For example, station management may want people who listen to country music or women aged 25 to 34. Finding people who fit the predetermined criteria (*screening*) can be costly, however, and specifying more qualifications results in a greater turndown rate, increasing the price for screening. Assembling a typical focus group generally costs between \$4,500 and \$5,000, including the fee paid to each participant (\$50 is the standard fee, although it is sometimes as high as \$150 for individuals difficult to recruit, such as physicians and other professionals).

Focus group research is especially useful for eliciting reactions to visual material and gaining insight into subtle responses to televised characters and individuals. These small group discussions can be used to develop precise questions for later field surveys of a large sample of people. For example, researchers commonly use focus groups to evaluate whether a station has enough news programming, whether music is too soft or loud, how people react to the newscasters, whether personalities are perceived as interesting or friendly and so on. The particular advantage of focus groups is that videotapes, newspaper ads and recordings can be evaluated in the same session, providing immediate feedback while avoiding confusion in recall after a lapse of time.

Approximately 200,000 media-related focus groups are conducted each year. The latest trend is to use internet-based videoconferencing for focus group observers to save travel costs and allow more people to observe the groups during the session. This technique is sometimes used to test new promos and programs. The biggest pitfall of hightech focus groups is that many nonverbal behaviors are lost in the mediated setting. Videoconferencing technology, while continuing to improve, presents limited information from participating individuals. In a face-to-face focus group, cameras can record each participant and the moderator during the entire focus group, enabling researchers or clients to study group member reactions while another person is speaking. There are many important reasons why the data and results obtained from focus groups can't be generalized to a larger audience. An obvious limitation is the *small size* of the group. Even when a

number of different focus groups are conducted, the sample size will not allow for valid generalizations to thousands, let alone millions, of people.

Another major drawback is the *selection process*. Focus group participants are not selected using a statistically valid random sampling process, by any stretch of the imagination. To generalize from a sample to the larger population from which the sample was drawn, random sampling procedures absolutely must be used. In a random sampling process, every person in the population has an equal chance of being selected. A random sampling process greatly increases the chances of the sample's responses representing the population from which the sample is drawn. Even then, there is always a slim chance that the random sample may be nonrepresentative.

In addition to not being randomly selected, focus group participants differ from the general public by their *willingness* to spend the necessary time and to provide the types of information of interest. Researchers can never be sure if those who participate differ in really important ways from those contacted who declined participation. (Would you do it if stopped in a mall? Usually takes a couple of hours, and the "reward" is often store coupons.)

Other serious limitations that prevent generalizing to the larger population include participant responses that are elicited under highly artificial conditions. Normal viewing or listening behavior takes place in the household setting or at work (or in vehicles in the case of radio), not in the company of nine or ten complete strangers whom the participant has never seen before and will never see again. These conditions also increase the likelihood of groupthink or contagion of ideas. This means that one person's response shapes the subsequent responses of other group members and would not likely have occurred if each individual were interviewed separately. Sometimes a domineering and authoritative individual may intimidate other participants or pressure them to go along with a given expressed view, even if it is not what the others really think.

The specific *questions* asked, how they are worded, the order in which they are asked, and how they are presented verbally to participants also influence the quantity and quality of responses. Questions

may elicit responses that would never have occurred spontaneously to participants outside the focus group setting. Finally, the quality of the moderator directly influences the focus group outcomes. Skilled moderators can make all group members feel comfortable and believe that their responses are equally valued, especially if participants disagree with what someone else has said.

Focus groups have enormous diagnostic value for programmers. "Why" questions are particularly well suited to focus groups, as well as any questions that require explanations that go beyond basic "ves or no" answers. And, just as group contagion can invalidate some responses, the group setting can successfully elicit responses that an individual may not have recalled when required to provide answers in traditional survey or individual interview settings; such responses may be elicited especially when members feel similar to other participants. Focus groups can also provide an effective means of developing appropriate questions to ask a larger random sample of audience members in future research that uses scientifically valid sampling procedures, so they're useful for learning what we need to learn.

Music Research

Radio programmers want to know their audiences' opinions of different songs and different types of music. They need to know which songs are well liked and which ones no longer have audience approval (which songs are "burned out"). Call-out research has been one popular, although controversial, method for discovering what listeners think about music selection.

Programmers conduct call-out research by selecting 5- to 15-second "hooks" from well-established songs and playing them for respondents over the telephone. A *hook* is a brief segment or musical phrase that captures the song's essence, frequently its theme or title. Using computers to place the calls, play the music and record responses automatically, programmers are able to ask randomly selected respondents to rate 15 or 20 song hooks on a predetermined scale. Often a scale of 1 to 10 is used, where 1 represents "don't like" and 10 represents "like a lot." Call-out research indicates listeners' musical tastes at a given moment. If stations perform call-out research frequently (and some use it every day), a track record for each song develops, and based on it the music programmer can decide whether to leave the song in the station's rotation or drop it. When tied to the same songs for some time, it indicates song popularity but does not tell the programmer how often a particular song should be played. That remains the programmer's decision.

Another popular method of testing music is auditorium research. Programmers invite 75 to 150 people to a location where they jointly listen to and rate a variety of songs. Instead of rating just 15 or 20 hooks, as in telephone research, auditorium tests involve 200 to 400 hooks. Like call-out research, the method tells which songs are liked and disliked at the moment but not how often they should be aired (see Chapter 11 on Music Programming).

Music testing is expensive. Call-out research requires an investment in employees to make the selections and maybe the calls—as well as investment in computer time to analyze the results. Auditorium tests involve recruiting costs and "co-op" money for participants (usually \$20 to \$35). Those stations lacking facilities and personnel for music testing can hire commercial firms specializing in such work. See www.musictec.com/method.html.

Television Quotient Data (TvQs)

Many programmers use Marketing Evaluation, Inc.'s proprietary television quotient data (TvOs) to supplement Nielsen ratings. While Nielsen provides information on how many people watched a program, TvOs measure the popularity/appeal (likeability) and familiarity of TV programs and performers (from TV, movies, sports and other celebrity venues). TvO data have been collected since 1963, relying on a panel of household members that since 1980 has included over 50,000 total households. Eight different services are provided: TvQ (programs), Performer Q, Product Q, Kids Product Q, Cartoon Q, Cable Q, Sports Q and Dead Q (performers from the past don't you love it?!). Of these, TvO and Performer O are the best-known measurements.

Networks and programmers use the various TvQ services to identify actors who have "star" potential, given the assessment of both *recognition* and *likeability* that the scores provide. Some research companies use various Q scores to project the eventual success (or lack thereof) of a network series in syndication. Unlike ratings, these models factor in how people feel or felt about a program, not how many watched it. Like the Nielsen ratings, Q scores are numerical, but they are labeled "qualitative" because they assess how much performers and shows are liked. Nielsen ratings are objective measures of viewing, while Q scores are subjective measures of the appeal and familiarity of performers and programs.

Ratings Services

Ratings exert powerful influences on programming decisions by syndicators and station representatives (as illustrated in Chapter 6), by commercial network and station television programmers (as discussed in Chapters 2, 7 and 8) and by noncommercial television programmers (as covered in Chapter 10). Radio programmers also use ratings information to evaluate their market positions, choose formats and convince advertisers to buy time (see Chapters 11 and 12). And ratings are used in cable/satellite/telco distribution and online in specialized ways (see Chapters 3, 4 and 9). In fact, all programmers use ratings in program decision making, but how to use them isn't self-evident. Consequently, the rest of this chapter looks at the ways programmers interpret ratings data.

Using audience ratings is not restricted to programming applications. In fact, ratings were originally intended only to provide information for advertisers curious about audience size, and their value to advertisers continues to drive the ratings industry. Even today, unsponsored programs, including presidential addresses and political programs, are not rated by Nielsen exactly because they do not carry advertising.

Once the statistical reliability of ratings data became accepted, programmers began using audience

measurement to gauge the success of their decisions. As competition among networks and stations increased, ratings became the most important decision-making data in commercial broadcasting. Broadcast revenues, programs, stations and individual careers depend on audience ratings. In the business of broadcasting, high ratings normally result in profits (and continuing careers). Broadcasting also has public service obligations and other aspirations and commitments, but on the purely economic side, a network or station will eliminate a program that receives low "numbers" if other, more viable options are available.

Cable/satellite rating cannot be compared directly to broadcast ratings because the potential audience viewing subscription channels is about 92 percent that of the commercial broadcast networks (61 percent are cable and 31 percent satellite/other). Moreover, scheduling is different: Many of cable's programs are scheduled in rotating and repeating patterns rather than one-time-only patterns—although this is changing because broadcasters now repeat their shows (you've noticed!), and cable has lots more original fare (you've noticed all those hours of cooking, racing, picking, digging, selling and on and on). Further, in addition to using standard ratings numbers, cable programmers analyze ratings to determine audience reach—how many people over a period of time viewed a repeated program or channel—much as public television programmers use ratings.

Articulating the power of audience ratings may sound crass to those who consider broadcasting an art form—or passé to those who are immersed in the internet—but in reality ratings continue to be the most important measure of commercial success. The efforts of most people involved in commercial broadcasting focus on achieving the *highest possible numbers*. Targeting more precisely defined audiences—such as women aged 25 to 54—is an alternate approach for television networks and stations that cannot immediately achieve a number-one position in the adults 18+category.

In 2011, however, Nielsen finally began to rethink its decades-long interest in audience demographics, as broadcasters looked for a better way to measure the effectiveness of advertising. Nielsen Catalina, a partnership with a loyalty-marketing firm, offered a new model for measuring TV audiences based on viewer-purchaser behavior. Whether this new system will eventually replace demographics-based ratings remains to be seen. In the meantime, it is necessary to understand that many advertisers want demographic data so they can match their prospective customers to their commercial messages (whether those customers want to be matched is another question).

Alternatives to standard TV ratings emerge from time to time over the years, all proclaiming their inherent advantages over Nielsen data. The latest challenger is Optimedia US (owned by Publicis Groupe SA), whose "Content Power Ratings" (ironically abbreviated CPR) not only count TV viewers but also add in social media mentions on Facebook, Twitter and the like. Reporter Emily Steel provided some interesting comparisons of Nielsen program rankings and those from the CPR,4 showing that South Park which is carried by Comedy Central, for example ranks #211 in the Nielsen rankings but is ranked #4 in the CPR. Glee (FOX) was #2 in the CPR but only #55 in Nielsen; The Office had a #6 CPR rank and was #105 on Nielsen. Other top programs were not nearly as far apart, such as Grey's Anatomy with an 11 CPR rank and a 28 from Nielsen.

Evaluating social media's role in stimulating viewing of particular shows is an emerging research phenomenon, and it obviously has some considerable significance for those TV programs that appeal to viewers who are regular social network users. Publicis Starcom Worldwide and Network Insights now measure the "positive buzz" on sites like Facebook and Twitter to assess its influence on new shows. For example, based on buzz, researchers predicted before the 2011-2012 season that FOX would have the most hits, followed by NBC, and were they right or wrong?

Which programs deliver the ideal reach and frequency of viewing by their target markets at the best possible price (aka, the biggest bang for the buck) is what advertisers want to know. Universal McCann continues to refine its statistical models that incorporate data that include TV viewership, company sales and other business data to estimate (guess) how much commercial time should be purchased and at what price not only on broadcast TV but on other media channels. Good luck with that.

Reaching the target market and staying within the allotted budget remain paramount in the minds of advertisers. What happens to those in the target market if they are in fact "reached" by the advertisers' messages remains an elusive area of audience research. Regardless, no single model, no matter how complex, can be used for just any product or service category or brand within the category. Different purchase cycles demand different objectives and tactics. New products or brands demand different ways of proceeding by comparison to wellestablished product/service categories or brands. No matter how great the advertiser's message is, it's obviously wasted if it doesn't find its way to target market consumers. The enormous difficulties of accurate audience/consumer measurement loom over many interrelated industries. (Lots of jobs here someday.)

Like broadcasters, advertising-supported cable networks also need ratings information to convince advertising agencies to purchase time. Premium cable services such as HBO use their national ratings to convince local cable systems that their programs are watched and important for promoting the local system. Video game producers and online and telephone services have their own versions of measuring audiences to show that their content is viewed. Understanding the basics of the all-powerful numbers is essential in all of these businesses.

High ratings, demonstrating television's widespread household penetration, also carry clout with Congress. Legislators generally use television to get elected and reelected, and politicians pay attention to their local broadcasters and the five largest national networks because they reach such enormous numbers of people. Increasingly, the major cable operators and most popular social media influence politicians because of their ability to reach certain types of audiences (especially upper socioeconomic levels).

The growth of social media comes at the older media's expense, but primarily for time spent looking at a screen. That time could just as easily be used for social networking, user-generated programs (such as YouTube) or traditional network shows delivered directly to mobile devices. Companies like Radian6 and others have already begun to measure some kinds of social media (see 5.2). Measuring the use of mobile devices in relation to social media and traditional media adds other layers of complexity to the following discussion of ratings.

Television Services

The most important distinction in television ratings is between *national* and *local* (also called *market*) ratings. Nielsen Media Research is presently the sole company in the United States producing nationally syndicated network audience measurements (although some of its clients are not too thrilled with the monopoly it has on data collection). Except for Arbitron's ARB-TV measurement of out-of-home television viewing, Nielsen is also the only company in the United States producing local station ratings for television (also leading to some criticism about methods and pricing).

Other research firms collect and analyze television audience measurements of specialized types for only a portion of the country. Nielsen covers the entire country continuously for network ratings, using a separate sample of 12,000 households with people meters.

The largest broadcast networks and the top 50 cable networks contract with Nielsen for this ratings service. Nielsen Media Research, hereafter called "Nielsen" for the sake of simplicity, is a subsidiary of The Nielsen Company. Nielsen Business Media publishes SRDS, the leading advertising database, and owns Scarborough Research and Billboard Publications. Only a third of the parent Nielsen Company's corporate efforts are directed at measuring what consumers *watch*, with the larger portion focused on what consumers *buy*. The division called Nielsen Online measures the use of social media and newer forms of mediated communication.

Sweeps

Nielsen conducts four nationwide measurements of audiences (the sweeps) for all local television

stations—annually in *November*, *February*, *May and July*—producing the vital local television reports (see 5.5). These market-by-market reports allow stations to compare themselves with the other stations in their market. A separate ratings report (electronic as well as printed in a book) is published for each of the 210 markets in the country for each ratings period. These data are based on local people meters in the largest markets, a mix of diaries and local meters in the middle-sized markets, and diaries only in the smaller markets. The 25 metered markets operate on a sample of 400 to 600 homes that only partially duplicate the national people meter sample.

Today's ratings software can track hundreds of channels—broadcast or cable, terrestrial or satellite, PC or TV-delivered—and scan every channel every three seconds to report the tuning status of every TV set in the sample households. The data can be downloaded by conventional telephone or cell phone, reported the following morning as the overnights, and later compiled into the national people-meter database.⁵

A ratings period consists of four sequential weeks of data, reported week by week and averaged for the month. In addition to the four major nationwide television sweeps, large-market stations purchase ratings for as many as three more ratings periods (October, January and March). Midsized and smaller television markets perhaps purchase one ratings book beyond the four sweeps. The stations in a market contract individually with Nielsen for a ratings book, paying the cost of data collection, analysis, and reporting. In the very largest markets, stations pay as much as \$1.5 million a year for ratings; in very small markets, however, the price may be as low as \$10,000 annually. It is important to understand that stations pay for ratings in their market, and the quality could be better if stations could afford to pay more (advertisers, agencies and reps cover little of the cost). For example, samples could be larger and more representative, diaries could be more carefully doublechecked, more call-backs could be made, and data analysis could be more reliable, but each of these steps would substantially increase the cost of ratings to the stations.

5.5 Nielsen Media Research

ielsen gathers and interprets data on a wide range of consumer products and services as well as on television and the internet (but no radio). Nielsen's network audience estimates are reported in the Nielsen National TV Ratings (often abbreviated NTI for the division that collects the data), twice-a-year summary books, and in the abbreviated weekly booklets called The Pocketpiece Report (see Chapter 2 for a sample pocketpiece page). Besides the network-by-network ratings, pocketpieces (named for their size, designed to fit in a vest pocket in a suit coat) include the collective ratings for national public networks, basic cable networks and premium cable networks, giving network programmers a handy tool for comparing the performance of the networks and their competitors. DVD viewing is now fully incorporated into these reports. National viewing data are also reported in the other forms described in Chapter 6, often combined with product purchase and usage data.

Overnights: Nielsen also collects nightly ratings called overnights in the top metered markets, publishing this information every morning for the benefit of network executives and purchasing stations. Overnights, because of the smaller samples used and the big-city nature of the viewers, are only indicators of what the network ratings probably will be when the six-month NTIs are issued. But as more and more major markets are added to the overnight sample, the match between the overnight sample and the total sample comes much closer. About 70 percent of U.S. TV homes are in the overnight sample.

Local Books: Nielsen's other widely known task is the measurement of local market television viewing. These measurement reports are known as the Nielsen Station Index (NSI) and are published in Viewers in Profile for each market. Called the "ratings books," they are purchased by most television stations and advertising agencies. Nielsen household samples are drawn from the most recent national census, and the ratings are not weighted (adjusted to fit national or local population percentages). NSI prepares county-by-county reports on television viewing, various reports for commercial time buyers, several reports for cable networks and system operators, and an online computer service for customized analysis of reach, frequency and audience flow.

Product Tracking: Nielsen also offers a tracking service called the Nielsen Scantrack. This national panel consists of about 30,000 households who use handheld bar-code scanners to record all purchases, including prices, and whether each item was on sale. This information is then correlated with television viewing data derived from people meters, as well as from magazine and newspaper data. Each household transmits all its media data (TV and print) weekly over phone lines to Nielsen's center for data analysis. This service has enormous benefits for corporate brand managers and advertising agency media buyers (though it may be a pain to the participants).

Computers: The measurement of television audiences now includes computer users as programs appear on the internet. Nielsen//NetRatings is a service designed to provide high-quality information about the internet in a special pocketpiece and other formats.

Spot Tracking: Nielsen has another service called Monitor-Plus, which uses computer recognition technology to identify all commercials airing in the top 50 major markets. The NSI data is combined with the commercial data to provide a minute-by-minute gross rating point measurement for each TV spot overall; the information is also broken out by brand category and by how it compares to competitors' spots. Monitor-Plus enables buyers and sellers to track advertising activity across 15 specific categories of media, including television, radio and print.

This Nielsen service rates television commercials, measuring the viewing of commercial spots—not programs using its minute-by-minute ratings. The commercials are averaged across entire programs because per-spot data is too unreliable. This will be useful to advertisers because industry experts have long estimated that commercial ratings are about 5 to 10 percent lower than program ratings. That percentage can now be refined over time and eventually refined for different kinds of commercials in different program environments.

Diaries themselves continue to attract controversy in the 154 markets where they are still used as an economically feasible alternative to meters. In 2010, the Media Rating Council (MRC) withdrew its accreditation to the diary service known as Nielsen NSI. Officials at Nielsen expected the problem to be resolved, but the brouhaha served as a reminder that choosing a sample is complicated. In this case, it was determined by the MRC that Nielsen was using a flawed address-based system to replace an inferior random-dialing phone-based system (abandoned because 30 percent of homes use cell phones instead of landline phones).

Normally, station programmers purchase only the books for their own market, but programmers dealing with groups of stations may purchase all 210 local market reports for the entire country or a subset of books for markets where they have stations or cable systems. They can use these books to cross-compare the performance of programs in different markets, at different times of day, with different lead-in shows and so on. Other chapters in this book contain discussions about how ratings are used

in specific sets of circumstances and point out specific weaknesses (see 5.6).

National Ratings

Network viewing estimates come from a nationwide people-meter sample of 20,000 households with and without cable. To be included in Nielsen reports, at least 3 percent of viewer meters (or diaries in local reports) must record viewing of a cable service. This means that only the top 30 or so cable networks figure in most ratings calculations. Multiple-set households are counted only once in total television households (TVHH), thus making the sum of the audiences to several programs telecast simultaneously often bigger than the number of households said to be viewing at one time (HUT) because one household may tune to more than one program. Indeed, the average household has more sets than people. As of 2012, one ratings point represented the viewing of 116.000.000 television households (usually abbreviated 116.0 mill.), and each household represented 2.6 people.6

5.6 The People-Meter Furor

uch questioning has long characterized attitudes toward rating services, but until 2004, most of this debate stayed well within the media industry. At the start of that year. Nielsen Media Research announced plans to introduce local people meters in New York City and Los Angeles, replacing set-top meters and paper diaries and providing previously unavailable demographic details about local viewers.

But when preliminary testing showed a huge drop-off in total viewing, especially among minority audiences, Nielsen faced loud charges of racial and ethnic bias in the press. Much of the criticism came from a campaign spearheaded by Rupert Murdoch's News Corporation and a coalition of black and Hispanic community leaders. In addition, producers of programs targeted to minority populations became worried that the new system would underrepresent minority viewing. On the other hand, many experts claimed that minorities had been oversampled for decades, which led to an apparent drop in viewing when they were more

accurately measured. Attempts to quell suspicions were marked with numerous delays, and congressional investigations and audits were threatened, despite the issue being largely perceptual rather than substantive.

To improve its image and forestall legal action, The Nielsen Company had to lobby Congress, make big charity donations and undertake sponsorship of community events for minorities in several cities. (Insiders chuckled to think of Nielsen Media Research handing out pens, T-shirts and balloons in fair booths! This company doesn't sell anything to the public! Its high-priced products are sold only to other media companies.)

By the end of the year, the issue seemed resolved after outgoing NAACP President and CEO Kweisi Mfune announced support for Nielsen's use of people meters in local TV markets. But the issue could be resurrected at any time. Ratings are less than perfect to start with, and the services have a lousy history of accurately measuring minority viewing.

Radio Services

Only one company, Arbitron, provides quantitative local and national radio ratings. The consolidation of radio ownership in the late 1990s effectively drove out the need for competing services. Nielsen measures radio in 11 other countries, but not the United States, where it unsuccessfully experimented with a competing service between 2008 and 2010. Strategic Media Research converted its old Accuratings measurement (successor to Birch Ratings, if you've ever heard of that) into Accutrack, one of several similar services that qualitatively measure radio listening, but doesn't do quantitative measurements.

You may (or not) be surprised to learn that Arbitron measures radio audience sizes using paper diaries, supplemented by the internet for those who prefer responding online—but most of its ratings still come from paper scribbles. Arbitron's Radio Market Report tracks both in-home and out-of-home listening (in cars, offices and other places) for local radio stations in all of the 299 radio markets. The data come from weekly diaries mailed to a sample of households in each market. Each person 12 years or older gets a separate diary to fill out for one week, usually running from Thursday to Wednesday when it is to be mailed back to Arbitron. New random samples participate each week, and each participant sending back a usable diary currently gets \$3. The size of the sample depends on the history of response in the market and how much data collection the stations are willing to pay for (larger samples cost more money).

Data collection

Arbitron collects ratings for 48 weeks each year in the larger markets and for as few as 16 weeks in the smaller markets. This system is called continuous radio measurement, although it skips three weeks around Christmas/New Year's and one week in late spring. Arbitron also offers county-by-county reports of radio listening for about 42 customized survey areas and annual ratings for internet radio. It also provides Arbitron Information on Demand (AID), an online computer service for radio diary research. Recent radio ratings from Arbitron are available at www.radioandrecords.com.

Arbitron's Portable People Meter (PPM) is used in the 48 largest radio markets, with daily samples ranging from 510 (Memphis) to 3,882 (New York City). A PPM is the size of a cell phone or pager, and it records all daily electronic listening for several months. (Have you ever seen one?) Monthly rating reports for the top ten U.S. markets are the goal, but so far the technology has had problems and more problems. Reports for the first 33 markets were released by 2009 and the remaining 17 by 2010.

Discouraged by the slow pace of the PPM releases, several of the biggest radio companies jointly funded a competing company, Media Audit, that uses smart phones as the measurement system. By 2012, Media Audit had measured over 80 radio markets.

Nationwide Radio

Radio's All Dimension Audience Research (RADAR 108), owned by Arbitron, reports on the performance of the national radio services. RADAR reports cover the size and demographics composition of 50 radio networks operated by American Urban Radio Networks, Citadel Media Networks, Crystal Media Networks, Dial Global Media, Premiere Radio Networks, United Stations Radio Networks and Westwood One Radio Networks. RADAR reports are based on analyses of 48 weeks of continuous measurement using 395,000 members of Arbitron's diary and PPM databases. Arbitron also uses Mediaguide's broadcast monitoring technology to verify whether the radio commercials that were scheduled to be aired on affiliated stations of RADAR-rated networks were broadcast as indicated on the network commercial clearance reports. RADAR ratings are the only nationwide radio network ratings, and are reported for the top 10, 25 and 50 markets.

Online Radio

Since 2004, comScore has provided broadcast-type ratings for the online radio industry. It passively and continuously captures the online radio behavior across the country of nearly 250,000 U.S. listeners. ComScore reports weekly cumes, quarter-hour ratings and most demographics in the 15 standard broadcast dayparts for AOL Radio, Clear Channel Online Music, ESPN Radio, Live 365 and Yahoo Music Launch-out. Measurement is important to these big radio webcasters because it legitimizes a program service that reaches far beyond the usual geographic limits for a radio station and supplies advertisers with the data they need to make informed decisions about media buys.

Online Video

In 2010, comScore updated its measurement of online video with the introduction of Video Metrix 2.0, which added the capability of distinguishing between program content and the advertising within the shows. Video Metrix provides the television industry's only comprehensive measurement of the video marketplace, with the ability to track video advertising, top television programs, viral videos and syndicated traffic. The comScore service also classifies video-viewing activity by TV dayparts. The largest primetime networks showed viewing to their respective video sites (as shown in 5.7).

Video Games

Until advertising began appearing in video games, user measurement was not a priority, even though video game playing was clearly replacing some traditional media behaviors (especially among the 18 to 34 male demographic). But by 2005, the video game industry was raking in more billions of dollars annually than the movie industry, a fact that made the advertising industry take note. Looking ahead in 2004, Nielsen expanded its definition of viewing to include "screenbased" advertising in order to include games, cell phones, wireless and other portable media, and began testing ways to measure viewing by game users.

Console-based video game systems account for 15 percent of teenage males' daily use of media during prime time. One recently altered factor was the move of "television prime time for young males" into the late-night time period, leaving 8 to 11 P.M. for games. Nielsen has developed GamePlay Metrics as a way of mining people-meter data collected on television and internet use, adding the passive collection of game titles, and matching all the data to

demographics and dayparts to inform the sale of advertising. GamePlay Metrics reports tell who is playing what game, the type of console used (applies to Sony, Microsoft and Nintendo, so far), the genre of the game, and what other media the players consume. The weekly data comes from the same 10,000 households used to provide television ratings.

The next generation of game consoles is likely to include special signals related to advertising in games that Nielsen can track, and such measurements will be extended to wireless (phone and PDA) receivers as fast as the technology can be developed. Selling advertising within games and consoles is part of a national media trend to place ads everywhere and closely measure media usage. Industry profits are needed to fund the enormous cost of developing subsequent generations of consoles, and later, wireless equipment and content.

Social Media

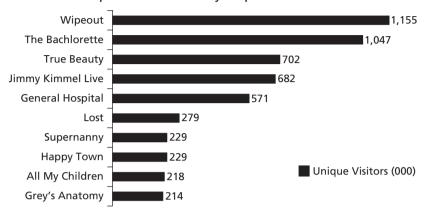
Social networking sites (SNSs) like Facebook and Twitter attract huge masses of viewers for their screen-based entertainment and information (in case you hadn't noticed!). At last count, Facebook had over 700 million members worldwide, and Twitter had 200 million users (but these numbers swell in the night). At this writing, the difficult problem of measuring their audiences is unsettled and evolving rapidly, but many companies are tackling solutions. Such companies as Attensity, Radian6, Statsit, Sysomos and Vocus retrieve text-based indicators of customer satisfaction (and dissatisfaction), but they barely skim the surface of the information that might be collected, and the data they collect is in no way the equivalent of ratings.

Specialized Audiences

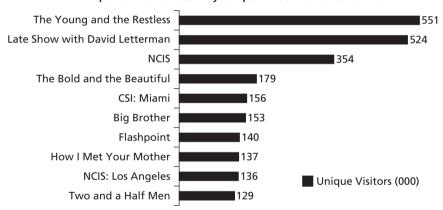
Programmers and advertisers constantly pressure the rating services for more information about aspects of the increasingly fragmented media audience. On the television side, the larger audience shares captured by cable create demand for an even more precise understanding of audience viewing habits. Thus, in local market reports, the ratings companies break demographic information into smaller units (such as

Sample Online Video Ratings

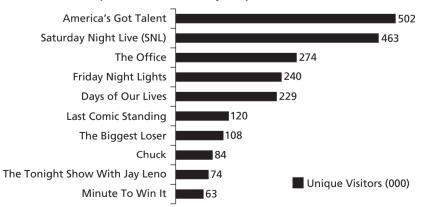
Top Shows on ABC.com by Unique Video Viewers June 2010



Top Shows on CBS.com by Unique Video Viewers June 2010



Top Shows on NBC.com by Unique Video Viewers June 2010



10-year jumps for radio) and more useful categories for different groups of advertisers. In addition to the classic adults 18 to 49, 25 to 54 and the like, both women 18 to 34 and women 25 to 49 are now included, for example, as well as similar subgroups of men, children and teens.

In addition to local and national ratings reports, Nielsen and Arbitron offer various customized reports covering narrower views of the audience (for example, males aged 18 to 34, Hispanic women aged 25 to 54 or college students) and specialized programming, such as Nielsen's analyses of syndicated program ratings, which are particularly useful to stations making program purchases. Chapters 6 and 8 make a special point of the importance of syndicated program reports, which are illustrated later in this chapter.

Ratings Terminology and Measurement Computations

Nielsen collects television audience estimates by randomly selecting viewers from the 210 U.S. broadcast television markets. The number of markets varies slightly from year to year and has grown along with population increases. Nielsen calls the markets Designated Market Areas (DMAs). These areas are roughly equivalent to Areas of Dominant Influence (ADIs) as determined by Arbitron for measuring radio markets. Many more radio markets exist, however, to account for listening in low-population-density areas. Nielsen collapses these very small markets with the nearest big city television audiences.

Survey Areas

For each market, Nielsen collects ratings data from more than just the DMA, as shown in 5.8. The smallest measurement unit is the Metro Area, the next largest is the local DMA, and the largest unit (part shown) is the Nielsen Survey Index Area (NSI Area). The NSI Area includes the DMA and the Metro Area but also encompasses counties outside the DMA where viewing can be attributed to a station in the DMA. These three geographical areas are described more fully in the following sections.

NSI Area

The NSI Area includes all counties measured in a ratings survey, including counties outside the DMA when substantial viewing of stations inside the DMA occurs in them-viewership is usually the result of carriage by cable systems. Rarely used by commercial television programmers (because DMAs are more useful), NSI Area figures show a station's total estimated reach or circulation. As indicated earlier, reach tells how many people have viewed or listened to a station in the past, and it therefore suggests how many could view or listen in the future. In cable, reach tells how many households subscribe to basic cable service. Reach is an important measure for radio, public television, cable and online websites. Another name for reach is cumulative audience, or cume.

DMA

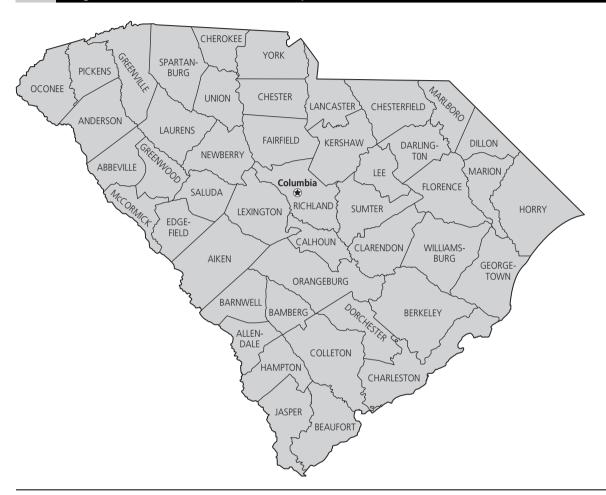
Each county in the United States is assigned to only one DMA. Generally, a DMA centers on a single city, such as Charleston, Denver or New York, but in some cases two or even three cities are linked in hyphenated markets, as in the Florence/Myrtle Beach and Springfield/Decatur/Champaign markets. All stations in these multiple markets reach most viewers. making the cities one television viewing market. Nielsen ranks each DMA according to the estimated number of television households within its counties. As of 2012, the top five DMAs in rank order were New York (with over 7 million TV households), Los Angeles, Chicago, Philadelphia and Dallas/Ft. Worth.

Metro Areas

The third geographical area, the Metro Survey Area (MSA) in radio and Metro Rating Area (MRA) or simply "Metro" in television, is the smallest of the three survey areas and is the one most frequently used for radio programming. The Metro includes only a small number of counties closest to the home city of the DMA, but often consists of only a single, gigantic county in some parts of the United States, especially in the West.

Because competing big-city radio signals generally blanket the Metro, urban radio programmers use it to determine the success or failure of

5.8 Diagram of a Television Market Survey Area



programming decisions. (Coverage patterns in outlying areas may vary too widely to compare.) The Metro represents the majority of urban radio listeners, the bulk of office and store listening and a large part of in-car listening. Altogether, more than 280 Metro areas are measured by Arbitron for radio listening. Radio stations on the fringe of the Metro area are more likely to refer to Total Survey Area (TSA), which is comparable to NSI area measures. But television programmers rarely use Metro ratings because no demographic breakouts are available.

To use any of these ratings services for programming decisions, programmers must understand how the estimates are produced. Using ratings without this knowledge is like trying to play chess without learning the rules. Pieces can be moved, but winning the game is unlikely. Memorize the saying, "Audiences count, but only in the way they are counted." Print it on your wall and make signs all over your home, and figure out what it means. We try to tell you in the following subsections which provide an overview of the basics of audience computations, but telling isn't understanding. That's up to you.

Ratings/Shares/HUTs

A rating is an estimate of the percentage of the total number of people or households in a population tuned to a specific station or network during a specific time period (daypart) such as morning drivetime or prime access (7 to 8 P.M. eastern/Pacific time). A share is an estimate of the percentage of people or households that are actually using radio or television and are tuned to a specific station or network during a specific daypart. The sum of all program shares equals 100 percent, but the sum of all ratings equals the percentage of total viewers (one must include nonviewers to get 100 percent). Ratings depend on a count of all receivers; shares on a count of all users. Shares are always bigger percentages than ratings for the same program or station because some people who could watch television (or listen to radio) are not watching (they are sleeping or playing games or actually working).

Ratings are always a percentage estimate of an entire population, whether the population refers to all households in the country or all people aged 25 to 54 or all adults 12+ or all women aged 18 to 49. Populations can be anything you say they are. A share is always a percentage of those households or people in that population using the particular medium at a specific time. To restate, shares always appear larger than ratings because they are based on a smaller sample of people. Fewer people use television (or radio or cable or the internet) than could use it if all were at home, awake and choosing television above other activities. Both estimates are percentages of an entire group, although the percent sign is often omitted.

Sales staffs use ratings to set advertising rates. Programmers generally use shares in decisions about programs because shares show how well a program does against its competition. Shares eliminate all the people who are not watching TV and show how many of those watching TV are tuned to a program or station. Programmers at broadcast networks and stations as well as cable services typically refer to their shares of an actual audience, not their percentage (ratings) of potential households, although newspaper articles often report ratings (or mix up the two kinds of data).

The combined ratings of all stations or networks during a particular daypart provide an estimate of the number of households using television (HUTs), persons using television (PUTs), or persons using radio (PURs). HUTs, PUTs and PURs are used to compute the shares for each station or network. Dayparts are more meaningful for radio audiences, which are less likely to time-shift their media consumption.

To illustrate these concepts, let's assume there are only four network television options in the United States (like in olden days) and that Nielsen's metered households (12,000 in reality, but rounded to 10,000 to keep this example easy) indicate the following hypothetical data for prime time:

Network	Household Viewing
ABC	1,904
CBS	1,928
NBC	1,976
FOX	1,222
None	2,970
Total	10,000

The HUT level is .703 or 70.3 percent (7,030/ 10,000), calculated by adding the households watching television and dividing by the total number of households with television (1,904 + 1,928 + 1,976)+ 1,222 divided by 10,000 equals .703). The answer is changed from a decimal to a percentage by multiplying by 100. A HUT of 70.3 means an estimated 70 percent of all households had a television set on at the time of the measurement. The individual ratings and shares for the four networks can now be calculated.

$$RATING = \frac{Households \ Watching \ a \ Network}{Households \ with \ Receivers}$$

$$SHARE = \frac{Households \ Watching \ a \ Network}{Households \ Watching \ TV}$$

To calculate a rating, the number of households watching a network is divided by the total number of households that have receivers. To calculate shares, the number of households watching ABC, for example, is divided by the total number of households watching television.

Network Ratings	Share
ABC $\frac{1,904}{10,000}$ = .190 or 19%	$\frac{1,904}{7,030}$ = .271 or 27.1%
CBS $\frac{1,928}{10,000}$ = .193 or 19.3%	$\frac{1,928}{7,030}$ = .274 or 27.4%
NBC $\frac{1,976}{10,000}$ = .198 or 19.8%	$\frac{1,976}{7,030}$ = .281 or 28.1%
FOX $\frac{1,222}{10,000}$ = .122 or 12.2%	$\frac{1,222}{7,030}$ = .174 or 17.4%

The individual ratings for all the stations in a market during a given daypart should approximately equal the HUT. Network programmers primarily use rating and share estimates to compare program audiences, but often they also are interested in the specific number of persons in the audience. Ratings can be used to project to any particular population. For example, the data for the four networks listed produced these estimates for the entire United States (having a total population of about 116 million households):

Network	Rating × Population	Population = HH Estimate
ABC	$.190 \times 116$ million	= 22,040,000
CBS	$.193 \times 116$ million	=22,388,000
NBC	$.194 \times 116$ million	=22,504,000
FOX	.122 × 116 million	= 14,152,000
	.699 (or 69.9%)	=81,084,000

The number 22,040,000 represents the 211 million people estimated to be watching ABC (at this specific time). These calculations can be verified by multiplying the HUT, 69.9, by the total number of households: $.699 \times 112$ million = 78,288,000, the total for the four networks.

Using part of a page from a Charleston (SC) Nielsen book (see 5.9), we can see how ratings and shares were computed for the local television stations WCBD, WCIV and WCSC. To calculate the rating and share for WCSC, in this morning/midday example, Nielsen first analyzed diaries from a sample of households (HH) in the Charleston DMA. It then projected the sample returns to the DMA

household population. Approximately 8 percent of the total diaries were tuned to WCSC from 12 noon to 3 P.M.

If we assume that 8 percent of the diaries reflects 8 percent of the total households (always an iffy call but done constantly), the number of homes watching WCSC can then be calculated. An estimated 266,400 television households in the Charleston DMA (this information is supplied on another page) yields 21,312 homes for WCSC $(.08 \times 266,400 = 21,312)$. The share for WCSC was computed by using the HUT (see the H/P/T totals), which was 24 (percent). Twenty-four percent of 266,400 yields 63,936 HH, and when that figure is divided into WCSC's 21,312 HH, a share of 34 results. (Actually, the calculation is 33, but because the reported ratings are rounded to the nearest whole number, the math does not always work with whole numbers. Either the 8 rating is actually slightly larger than 8 and rounded down, or the HUT rating is slightly lower than 24 and rounded up.)

Further evidence of Nielsen's rounding can be seen in the 12 noon to 4:00 P.M. time period on the same page. In that time period of the Nielsen report, you will see that WCBD and WCIV both have "2" ratings, but each station's share is different. We can compute more accurate ratings by manipulating the basic formula, usually written as

$$\frac{\text{Rating}}{\text{HUT}} \times 100 = \text{SHARE}$$

The calculated value is multiplied by 100 to create whole numbers instead of decimals for shares and ratings. If we transpose to

$$RATING = \frac{Share \times HUT}{100}$$

we can rate more accurately:

WCBD Rating
$$\frac{7 \times 30}{100} = 2.1$$

WCIV Rating
$$\frac{8 \times 30}{100} = 2.4$$

Keep in mind that all ratings and shares are percentages and must include decimal points for all calculations, although to make their reports easy to read, ratings companies do not print the decimals (see 5.10).

Daypart Ratings Page

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5.10 A Visual Aid for Remembering the Formula

The basic relationship among the three variables (rating, share, HUT) is easy to understand but sometimes difficult to remember. Here is a visual aid:

(Putting the R "on top" is easy to remember because ratings are most important to the station or channel for advertising purposes.) Here's how to calculate: If you want R (ratings), cover the R with your finger. The result is S (share) multiplied by H (HUT). If you want share, cover the S with your finger. The result is R divided by H. Likewise, cover the H to calculate HUT: The result is R divided by S. (The number you get must be adjusted to provide a meaningful answer: If you multiplied, then divide the result by 100; if you divided, multiply the result by 100.) You may not get the exact result shown by Nielsen because the reported figures are rounded.

One final point concerning the 12 noon to 3 P.M. example is that the HUT/PUT/TOTAL line is 24, but if we add all the stations, the total rating is actually 16. The uncounted rating points mean that 8 percent of the households in the DMA were viewing cable channels for which no one channel received a 1 rating. Individual shares for all the stations should equal 100 percent when totaled, even if the tiny shares for cable viewing are unreportable.

PUTs/PURs

Ratings and shares for television generally represent households but occasionally refer to specific demographic groups such as women aged 18 to 49. Radio ratings always represent individuals or persons, and therefore, the term *persons using radio* (PUR) is used. *Persons using television* (PUT) is appropriate when calculations of individual viewers are made. Sales staffs and time buyers tend to be more interested in these calculations than programmers are, and one of the big advantages of people meters is

that they supply individual-person data as well as household data for the advertising industry.

AQH/Cume

Programmers use two very important computations in calculating ratings: average quarter-hour (AQH) audiences and cumulative audience (cume) estimates. Program audiences are typically measured in 15-minute intervals, hence "quarter-hour audience." Meters can, in fact, measure one-minute audiences (or even one-second audiences in comedy research, for example), but a person or household is counted in a quarter hour if the television was turned on for a minimum of five minutes during the measurement period.

Although radio and television diaries also measure audience size in 15-minute intervals, TV programmers use these data in much larger units—by whole program or daypart. Quarter hours are the particular concern of those who try to count fickle radio listeners. (Both time units may be too broad for accurately measuring channel jumpers and grazers and radio button pushers!)

Cumulative audience measures are appropriate for small audiences that would not show up in rating/share measures. Cume measurements indicate the number of different people tuned in during a 15-minute (or longer) time period. Cume figures are always larger than AQH figures, which are averaged.

The basic difference between AQH and cume is that in the average quarter-hour calculation, persons can be counted more than once in a total daypart. For instance, a person could tune to a station for five minutes, switch stations or tune out, and then tune back in to the original station during a later quarter hour. This viewer would be counted twice in an AQH calculation but not in an exclusive cume calculation because it counts only the number of different persons listening. Cume is considered to be the reach of a station because it tells you how many different persons were in the audience during a time period or daypart. It also reflects the growth or decay of an audience over time.

Public television and basic cable audiences are often too small for accurate measurement within one

quarter hour, but cumulative ratings over a longer period of time may reflect more substantial audiences. Cumes can also be calculated for a single program over several airings, a common pattern in public television and cable measurements, permitting programmers to estimate the total number of people who watched a program. Commercial broadcasting with its special interest in the number of people watching one commercial spot generally uses AQH ratings.

Reach and Frequency Analysis

Salespeople most often use the concepts of *reach* and *frequency*. As we said earlier, **reach** refers to circulation or potential exposure—or the net size of the audience that actually gets the signal (gross would be all the people living in the country). **Frequency** refers to the number of times a person was exposed to a particular advertising message (or program). A high frequency means exposure to a message several times and indicates the "holding power" of a station, network, or program. *Programmers usually schedule several interesting programs in succession, trying to create audience flow and achieve a high frequency for advertisers among successive programs appealing to the same viewers.*

Television Market Reports and Other Programming Aids

Market reports (or "books") are divided into sections to allow programmers, salespeople and advertisers to examine an audience from many perspectives for a particular local DMA. In television, the major sections are: Daypart Audiences, Time Period Averages and Program Averages.

Daypart Audiences

The Daypart Audiences section divides viewing into 37 dayparts, a highly useful format for analyzing a station's overall performance in specific time blocks. For instance, Monday through Friday noon to 6 P.M.

provides a quick summary of the ratings and shares for all stations during that daypart. The page from a Nielsen book in 5.9, presented earlier, shows the crucial 3 P.M. to 5 P.M. period in the Charleston market toward the bottom.

Nielsen divides the viewers into 26 demographic (age and sex) classifications for both the DMA and the NSI station totals. For just one station, 754 ratings cells are required in order to fill out all 26 Nielsen people categories and 37 daypart categories for station totals alone. A single ratings book page contains an immense amount of data. Most programmers use computers to analyze the data.

A look at 5.9, presented in the previous section, shows that WCSC was the strongest television station in the market in the afternoon daypart, with a 7 rating/30 share in the DMA and 7/32 in the Metro. It was very strong with both W 18–49 and W 18–34 (the usual shorthand used in ratings analyses). No doubt this station was delighted because these demographics are very easy to sell to advertisers.

Programmers normally compare the current numbers to previous performances. Tracking a daypart shows how the station or program is doing over time. It is also important for selecting syndicated programs (see Chapters 6 and 8). Rarely will program decisions be based on only one book unless the numbers are very low and very credible, and no hope for improvement is in sight.

Time Period Averages

Television programmers are interested not only in broad dayparts but in quarter-hour or half-hour segments within them. This information, found in the Time Period Averages section of ratings books, is useful for determining a program's strength against the competition for a specific quarter hour or half hour. Managers of affiliates look here, for example, to see how their local newscast stacks up against its competitors. The Time Period Averages section also has an overview of access time and early fringe competition and shows lead-in and lead-out effects. Programmers use these data to analyze performance in time segments. (Salespeople use these data to determine spot ratings.)

Averages for the whole week, Monday through Friday, are included in the Time Period Averages section along with most prime-time network programming because it varies from night to night. These figures show performance during a daypart or time period when all days are averaged together, crucial data when a programmer is looking at stripped programming in early fringe and primetime access

Program Audiences

The last (but not least) major section of a television ratings book, the one television programmers most often use, is the Program Audiences section. Rather than lumping a program into a daypart, this section breaks each daypart and program into 30-minute segments (and some 15-minute ones) to isolate individual programs on different days of the sweep weeks. The Program Audiences section is considered the "pure programming" section because each program is analyzed individually here. It shows the titles of the shows and any scheduling variations from night to night. This allows programmers to examine ratings for their local news, say, night by night—and to eliminate the odd night when a sporting event, for example, cuts into the news time.

Look at the Program Audiences data for Charleston at 6 P.M. in 5.11. The numbers are the DMA rating/share and Metro rating/share for all weekdays (AV5-average for Monday through Friday). Notice that in DMA measurements, WCSC dominates the competition with a 25 share for its local newscast. The local news shows on WCBD and WCIV have a 15 share and an 11 share, respectively. The FOX affiliate WTAT came in fourth with a 7 share for Judge Judy. This section permits analysis of individual programs without interference from ratings for adjacent programs.

In summary, the sections of a television book provide programmers with at least four different ways to evaluate station performance. Daypart Audience data show broad time periods without regard to specific programs. Time Period Averages listings provide programming data by quarter hours and half hours on a daily basis and are useful in analyzing competitive performance. Finally, Program Averages information isolates the "pure program" data. Each section answers different questions, and television programmers use every section as their questions shift.

Because mountains of plain ratings data are nearly too much to deal with, Nielsen also issues reports on specific demographic groups or types of programs or station market sizes in easy-to-use formats, on which stations, reps and ad agencies rely heavily. They also depend on other companies to reanalyze Nielsen's ratings data and to supplement the data with other research. Of all these additional services, programmers find analyses of syndicated television programs the most valuable.

Syndicated Program Reports

Affiliates and independents rely on off-network and first-run syndicated programming to fill parts of their broadcast days. Because syndicated programs are expensive, however, station decision makers want to know about a program's past performance. Will a program perform well in their market? Will its ratings justify its cost? Reps and program consultants especially want this information because they advise station programmers. Projecting or estimating ratings success for a first-run product is an involved process that finally comes down to an educated guess. The potentials of off-network programs are somewhat easier to evaluate, but even here no hard-and-fast rules exist. Lead-in programs, local competition and audience fads always influence ratings. Even the most successful network program may fail in syndication or perform below its network numbers at a given time or in a given market.

In making decisions about syndicated programs, Nielsen's Report on Syndicated Programs is helpful. (The major television rep firms also provide similar analyses in less bulky and unwieldy formats, such as the Comtrac report example featured in Chapter 6.) A page from the Nielsen analysis of *The Simpsons* is shown in 5.12. At the top-left corner of the page, you will find the number of markets telecasting the program, the distributor and other data such as the program type and the number of episodes available.

Program Audience Ratings Page

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See Program Index for complete details of program start time, duration and weeks of telecast.

5.12 Syndicated Program Report Page on the Simpsons

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REPORT ON SYNDICATED PROGRAMS **NSI AVERAGE WEEK ESTIMATES NOV 2003**

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For explanation of symbols, see lead page.

The second section provides overall ratings and share data by market rank and by daypart. It shows the number of stations carrying *The Simpsons* in both early fringe (138 DMA markets) and in prime access (39 DMA markets), presumably to appeal to young viewers in the late afternoon time period. *The Simpsons* averaged a 4 rating and 7 share in both dayparts, higher than for any other daypart. This section shows which dayparts and market sizes a program has played most effectively in, quite useful information for programmers. Demographic data by daypart fill out the rest of this section.

The third section of the page shows a market breakout of specific stations carrying The Simpsons in syndication. The first market, alphabetically, that carried the program was Abilene-Sweetwater, where The Simpsons ran at 5:30 P.M. central time on KXVA, a FOX affiliate on Channel 15, and it had a 3 DMA rating and a 6 DMA (Monday through Friday) share. In that market, The Simpsons got lower ratings than the three nightly network newscasts but was a close fourth place to the NBC Nightly News (4/9). The Simpsons held most of its lead-in, That 70s Show, which had a 3 rating and a 7 share. Programmers use this information to purchase or renew the show and to schedule it during a daypart with a lead-in that will make it maximally successful.

This third section of the page also provides data on the total number of persons viewing a program in key demographic groups. In Albuquerque-Santa Fe, for example, *The Simpsons* was viewed at 5:00 p.m. by 11,000 women aged 18 to 49 (representing 55 viewers per 100 homes using television), a substantial increase over the lead-in. Nielsen's report does not show the demographic breakdown for competing stations. The programmer can, however, turn to the page for *Jeopardy* (not shown here) and see fewer women aged 18 to 49. Because *Jeopardy* also has many more women 18+ than *The Simpsons*, the programmer can deduce that *Jeopardy* skews toward older women who may not fit the advertisers' target.

Before purchasing a syndicated program, station programmers typically choose markets that are similar to their own in size and regional characteristics; they chart the performance of that program to determine its best daypart, its strengths and weaknesses against specific competing programs, and its demographic appeal. The *Report on Syndicated Programs* enables programmers to estimate the likely performance of a syndicated program and to schedule it effectively in their lineup. If a program proves unsuitable (demographically or in terms of ratings projections), the analysis is helpful in targeting another program to meet a station's programming needs.

The Report on Syndicated Programs is limited to program data about syndicated programs already on the air. Quite often stations must decide whether to purchase a program before it is released in syndication (or even produced). This is particularly the case with first-run syndicated programs (never on a network) and popular off-network programs (often purchased before any station has tried them out). (The subject of purchasing futures on programs is covered in Chapter 6.) In the case of off-network programming, national and local data from a program's network performance can be projected to the local market, though as you can imagine, many markets differ substantially from the national market. Purchasing first-run syndicated programs is much riskier, though, because they lack both network and station track records.

Computerized Services

All operations, including programming, are routinely computerized at broadcast stations and cable services of all sizes. Television ratings and syndicated program reports come on disks or online, and are more commonly accessed on computers than in paper "books," though the old name sticks. Local station programmers use computer software to schedule shows; print daily, weekly and annual program logs; and keep track of competitors' program purchases in the same way that reps track purchases for many markets.

A ratings book represents only a fraction of the data available from Nielsen. The books exclude county of residence, ZIP code, specific viewing and listening patterns and each individual diarist's

reported age (in ratings books, age is presented only as group data, for example, women 18 to 34). But then there are the raw diaries. A diary also tells what the diarist was watching at 5:45 P.M. before he or she began watching the 6 P.M. news. Nielsen stores this raw diary information on a secure website that stations can examine online. The information allows programmers to analyze nonstandard dayparts, specific groups of ZIP codes, nonstandard demographics, county-by-county viewing and audience flow patterns. In addition, sales staffs use the terminals to compute audience reach and frequency. If a programmer wants still more information on selected programs on a market-by-market basis, Nielsen offers its ProFile Ranking Report (part of the Galaxy software), which provides detailed comparisons.

The management of any station, network or cable service that subscribes to Nielsen (or Arbitron for radio) can personally review the real viewer or listener diaries, an important service for popular music radio stations. The main reason for inspecting the raw diaries is to search for unexpected entries such as how listeners or viewers recorded the station's or service's name or call letters (or slogan or air personalities). Sometimes diarists name things differently than stations expect them to. A station can remedy incorrect attributions in subsequent ratings periods by submitting a limited number of different "nicknames" to Arbitron (or by changing a slogan if it is easily confused with a competitor's). Before computerized systems became available, firsthand diary reviews (usually performed by specialist companies located near the diary warehouses) were standard procedure after each ratings book was published (these guys and gals are now out of work). Computer tape now permits the information to be examined anywhere if the appropriate software is purchased.

On the national level, television programs are introduced, launched, bought and withdrawn constantly. Keeping tabs on the daily changes in the program market involves constant record keeping based on information from the trade press and reports from reps and distributors. One crucial set of jobs for local programmers is keeping track of local program availabilities (syndicated programs not yet under contract in their markets) and their own station's program inventory, including contract details. plays and amortization schedules. Only the largest stations and rep programmers, however, have the resources to track all this crucial programming information and keep timely records. It can be a mess at small stations.

A great deal of information about program performance comes from third-party processors that sell research reports on national and syndicated television programs, using purchased Nielsen data. These services are based on the premise that raw information is less usable than processed information. For example, the Nielsen overnight ratings are analyzed by WRAP, a Windows ratings-analysis program from Audience Analysis, Inc. (AAI). Third-party processors like WRAP compete with Nielsen's two services (ProFile and Navigator) and with another major service, Galaxy, which offers additional analysis. Nielsen also offers a software package (N-Power) that provides access to household and individual-level viewing for television, and TAPSCAN is a third-party processor of Arbitron radio ratings. Station program directors can create rankings (called rankers) of all radio stations in a market based on daypart or demographic criteria. For example, stations could be ranked on exclusive cume, which is a measure of listeners who listened only to a certain radio station and no other. Some other thirdparty processors are described in 5.13.

Radio Reports

Audiences for the 14,000 radio stations in the United States are more fragmented than broadcast television audiences (although the spread of cable and satellite dishes is altering that condition for television). The largest radio markets such as Los Angeles have more than 80 stations, dividing the audience into tiny slivers per station. In general, radio stations compare their share of the audience and their cumulative audience to that of other stations with similar formats in the same market. The most popular stations use shares, and the least popular use cumulative audiences, although formats

5.13 Third-Party Analyses of Ratings

carborough Research provides a syndicated research Service to newspapers, television stations, radio stations, cable systems, internet companies, advertisers and agencies. Scarborough is a joint venture of Arbitron and VNU Marketing Information. Scarborough provides syndicated studies to print and electronic media, new media companies, sports teams and leagues, agencies, advertisers and yellow pages. Categories include consumer shopping patterns, demographics, media usage and lifestyle activities for local markets. Scarborough surveys more than 180,000 adults 181 using a two-phase methodology. Phase I is the telephone interview, and Phase II is a self-administered questionnaire and television diary. A total of 75 leading U.S. markets are measured. Every market has two six-month field periods each product year, eliminating any seasonal bias in the data and allowing users to account for new store openings and media changes.

One of Scarborough's premier products is called PRIME NExT, composed of four separate reports: Profile, which compiles lifestyles and habits of a specific audience group; Crosstab, which classifies several audience groups at once for comparisons; Schedule Analysis, which combines various proposed schedules of media and cost for analysis;

and Media Analysis, which collates media reach information into Cumulative (more than one spot or insertion minus duplication) or Ranker (average) reports, or into graph mode (visually combining elements from either report).

Media Audit is a near competitor to the kinds of studies done by Scarborough, except that the former is accredited by the Media Ratings Council. Media Audit bills itself as a multimedia, qualitative audience survey covering about 450 target items for each rated media's audience. These qualitative data points cover things such as socioeconomic characteristics, lifestyles, business decision makers, product purchasing plans, retail shopping habits, travel history, supermarket shopping, stores shopped, products purchased, fast-food restaurants eaten in, soft drink consumption, brands purchased, health insurance coverage, leisure activities, banks used, credit cards used, and other selected consumer characteristics important to local media and advertisers.

Wimmer Research is also well known for its expertise in custom-designed telephone perceptual studies. These include music testing, interactive software, focus groups, micro/macro-market studies, the Persuasion Process seminar and optical scanning data collection services.

that lend themselves to tuning in and out (such as all-news stations) use cumulative audience ratings even when they are popular. The top 100 radio markets correspond closely to television DMAs, but some areas in the West and South have radio but no television, so we remind you that the total number of radio markets (299) is thus greater than the 210 television DMAs.

Ratings books for radio are organized differently from those for television. An Arbitron radio ratings book contains Share Trends, followed by Demographic Breakouts, Daypart Averages, Cume Estimates, Hour-by-Hour Estimates and a few smaller sections. The age and sex categories used in radio differ from those used for television because radio stations target their programming to more precisely defined demographic groups. Thus, age ranges for radio are smaller than those used in television:

typically just ten years (for example, 25–34). Most classification groups end in "4" for radio (24, 34, 44, 54 and so on); the groups used for television (18–49, 25–54 and so on) are broader, reflecting the more heterogeneous nature of television audiences and thus television advertising sales.

Metro Audience Trends

The Metro Audience Trends section reports a station's Metro shares for five ratings books—the current survey and the previous four surveys—covering a period of about one year. These data show a station's share pattern (its "trend") over time for four separate demographic groups: 12+, 18–34, 25–54 and 35–64. A hypothetical example for the demographic category of Total Persons 12+ is shown in 5.14. A programmer can get a quick overview of all stations'